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EXAMINER	
LE, JOHN H	

ART UNIT	PAPER NUMBER
2863	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/609,210	KECK, JAMES C.	
	Examiner	Art Unit	
	John H Le	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 12-23* is/are rejected.

7)☒ Claim(s) *10,11,24 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 24 is objected to because of the following informalities:

Claim 24 recites the limitation "the thermistors" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-7 and 12-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6, 14, 15-18, and 30-31 of U.S. Patent No. 6,619,118 in view of in view of Luzzader (USP 6,014,076) as follows:

Instant application

1. A septic tank monitoring system for distinguishing between and identifying the location of a sedimentary layer, a scum layer, and any intervening liquid zone in a septic tank, the septic tank monitoring system comprising: an elongate sensing probe with a first end and a second end for being disposed in the septic tank; a plurality of sensors disposed along the sensing probe, the plurality of sensors each including a means for providing a signal that enables a determination of whether the sensor is disposed proximal to the sedimentary layer, the scum layer, or any intervening liquid zone in the septic tank wherein at least one of the plurality of sensors comprises a temperature transducer; and a remote monitor for being operably associated with the plurality of sensors wherein the remote monitor has a means for providing a remote indication to a septic tank operator of the location of the sedimentary layer, the scum layer, and any intervening liquid zone in the septic tank based on the signals from the plurality of sensors; whereby the septic tank operator can monitor the contents and condition of the septic tank without a need for excavating and physically inspecting the septic tank.

2. The septic tank monitoring system of claim 1 wherein the elongate sensing probe comprises an elongate member and a retaining member slidably associated with the elongate member and a means for biasing the retaining member to an extended position wherein a distal end of the retaining member comprises the first end of the elongate sensing probe and a distal end of the elongate member comprises the second end of the elongate sensing probe whereby the elongate sensing probe can be inserted into and retained within the septic tank by compressing the retaining member relative to the elongate member, orienting the elongate sensing probe in the septic tank, and allowing the retaining member to decompress relative to the elongate tube whereby elongate sensing probe can be frictionally retained in the septic tank with the first end of the elongate sensing probe frictionally engaging a first boundary of the septic tank and the second end of the elongate sensing probe frictionally engaging a second boundary of the septic tank.

3. The septic tank monitoring system of claim 2 wherein the retaining member comprises at least a length adjustment member and further comprising a means for adjustably coupling the length adjustment member to the elongate sensing probe for adjusting the effective length of the elongate sensing probe.

4. The septic tank monitoring system of claim 3 wherein the retaining member further comprises a body portion that is slidably associated with the elongate member and wherein the length adjustment member is adjustably coupled to the body portion of the retaining member.

5. The septic tank monitoring system of claim 4 wherein the length adjustment member is adjustably coupled to the body portion of the retaining member by a threaded engagement whereby the length adjustment member can be extended and retracted relative to the body portion by operation of the threaded engagement.

6. The septic tank monitoring system of claim 3 wherein the first and second ends of the elongate sensing probe each have at least one point for positively engaging the boundaries of the septic tank.

7. The septic tank monitoring system of claim 6 wherein the first and second ends of the elongate sensing probe are generally conical.

U.S. Patent No. 6,619,118

1. A septic tank monitoring system for distinguishing between and identifying the location of a sedimentary layer, a scum layer, and any intervening liquid zone in a septic tank, the septic tank monitoring system comprising: an elongate sensing probe with a first end and a second end for being disposed in the septic tank; a plurality of sensors disposed along the sensing probe, the plurality of sensors each including a means for providing a signal that enables a determination of whether the sensor is disposed proximal to the sedimentary layer, the scum layer, or any intervening liquid zone in the septic tank; and a remote monitor for being operably associated with the plurality of sensors wherein the remote monitor has a means for providing a remote indication to a septic tank operator of the location of the sedimentary layer, the scum layer, and any intervening liquid zone in the septic tank based on the signals from the plurality of sensors; wherein the elongate sensing probe comprises an elongate member and a retaining member slidably associated with the elongate member and a means for biasing the retaining member to an extended position wherein a distal end of the retaining member comprises the first end of the elongate sensing probe and a distal end of the elongate member comprises the second end of the elongate sensing probe whereby the elongate sensing probe can be inserted into and retained within the septic tank by compressing the retaining member relative to the elongate member, orienting the elongate sensing probe in the septic tank, and allowing the retaining member to decompress relative to the elongate tube whereby elongate sensing probe can be frictionally retained in the septic tank with the first end of the elongate sensing probe frictionally engaging a first boundary of the septic tank and the second end of the elongate sensing probe frictionally engaging a second boundary of the septic tank; whereby the septic tank operator can monitor the contents and condition of the septic tank without a need for excavating and physically inspecting the septic tank.

2. The septic tank monitoring system of claim 1 wherein the retaining member comprises at least a length adjustment member and further comprising a means for adjustable coupling the length adjustment member to the elongate sensing probe for adjusting the effective length of the elongate sensing probe.

3. The septic tank monitoring system of claim 2 wherein the retaining member further comprises a body portion that is slidably associated with the elongate member and wherein the length adjustment member is adjustable coupled to the body portion of the retaining member.

4. The septic tank monitoring system of claim 3 wherein the length adjustment member is adjustable coupled to the body portion of the retaining member by a threaded engagement whereby the length adjustment member can be extended and retracted relative to the body portion by operation of the threaded engagement.

5. The septic tank monitoring system of claim 2 wherein the first and second ends of the elongate sensing probe each have at least one point for positively engaging the boundaries of the septic tank.

6. The septic tank monitoring system of claim 5 wherein the first and second ends of the elongate sensing probe are generally conical.

Instant application
1. A septic tank monitoring system for distinguishing between and identifying the location of a sedimentary layer, a scum layer, and any intervening liquid zone in a septic tank, the septic tank monitoring system comprising: an elongate sensing probe with a first end and a second end for being disposed in the septic tank; a plurality of sensors disposed along the sensing probe, the plurality of sensors each including a means for providing a signal that enables a determination of whether the sensor is disposed proximal to the sedimentary layer, the scum layer, or any intervening liquid zone in the septic tank wherein at least one of the plurality of sensors comprises a temperature transducer; and a remote monitor for being operably associated with the plurality of sensors wherein the remote monitor has a means for providing a remote indication to a septic tank operator of the location of the sedimentary layer, the scum layer, and any intervening liquid zone in the septic tank based on the signals from the plurality of sensors; whereby the septic tank operator can monitor the contents and condition of the septic tank without a need for excavating and physically inspecting the septic tank.

12. The septic tank monitoring system of claim 1 further comprising a tank electronics unit coupled to the elongate sensing probe wherein each of the plurality of sensors is electrically coupled to the tank electronics unit and wherein the tank electronics unit is operably associated with the remote monitor.

13. The septic tank monitoring system of claim 12 wherein the tank electronics unit is operably associated with the remote monitor by an interconnecting cable for traveling from the septic tank to the remote monitor.

14. The septic tank monitoring system of claim 13 further comprising a cover plate for being disposed over the interconnecting cable as the interconnecting cable exits the septic tank for shielding the interconnecting cable from damage.

U.S. Patent No. 6,619,118
14. A septic tank monitoring system for distinguishing between and identifying the location of a sedimentary layer, a scum layer, and any intervening liquid zone in a septic tank, the septic tank monitoring system comprising: an elongate sensing probe with a first end and a second end for being disposed in the septic tank; a plurality of sensors disposed along the sensing probe, the plurality of sensors each including a means for providing a signal that enables a determination of whether the sensor is disposed proximal to the sedimentary layer, the scum layer, or any intervening liquid zone in the septic tank; a remote monitor for being operably associated with the plurality of sensors wherein the remote monitor has a means for providing a remote indication to a septic tank operator of the location of the sedimentary layer, the scum layer, and any intervening liquid zone in the septic tank based on the signals from the plurality of sensors; a tank electronics unit coupled to the elongate sensing probe wherein each of the plurality of sensors is electrically coupled to the tank electronics unit and wherein the tank electronics unit is operably associated with the remote monitor wherein the tank electronics unit is operably associated with the remote monitor by an interconnecting cable for traveling from the septic tank to the remote monitor; and a cover plate for being disposed over the interconnecting cable as the interconnecting cable exits the septic tank for shielding the interconnecting cable from damage; whereby the septic tank operator can monitor the contents and condition of the septic tank without a need for excavating and physically inspecting the septic tank..

Instant application
1. A septic tank monitoring system for distinguishing between and identifying the location of a sedimentary layer, a scum layer, and any intervening liquid zone in a septic tank, the septic tank monitoring system comprising: an elongate sensing probe with a first end and a second end for being disposed in the septic tank; a plurality of sensors disposed along the sensing probe, the plurality of sensors each including a means for providing a signal that enables a determination of whether the sensor is disposed proximal to the sedimentary layer, the scum layer, or any intervening liquid zone in the septic tank wherein at least one of the plurality of sensors comprises a temperature transducer; and a remote monitor for being operably associated with the plurality of sensors wherein the remote monitor has a means for providing a remote indication to a septic tank operator of the location of the sedimentary layer, the scum layer, and any intervening liquid zone in the septic tank based on the signals from the plurality of sensors; whereby the septic tank operator can monitor the contents and condition of the septic tank without a need for excavating and physically inspecting the septic tank.

15. The septic tank monitoring system of claim 1 further comprising a microcontroller operably associated with each of the plurality of sensors for providing each sensor with a high frequency alternating current flow.

16. The septic tank monitoring system of claim 15 wherein the high frequency alternating current is approximately 10 KHz.

17. The septic tank monitoring system of claim 15 further comprising a multiplexer and a synchronous demodulator for multiplexing and demodulating analog voltage signals produced by the current flow to each sensor and an analog to digital converter for converting the analog voltage signals to digital voltage signals.

18. The septic tank monitoring system of claim 17 further comprising means for processing and analyzing each digital voltage signal to determine for each sensor whether the material disposed in proximity to the sensor is the sedimentary layer, the scum layer, or any liquid zone within the septic tank and means operably associated with the remote monitor for displaying information representative of whether the material disposed in proximity to each sensor is within the sedimentary layer, the scum layer, or any liquid zone.

U.S. Patent No. 6,619,118
15. A septic tank monitoring system for distinguishing between and identifying the location of a sedimentary layer, a scum layer, and any intervening liquid zone in a septic tank, the septic tank monitoring system comprising: an elongate sensing probe with a first end and a second end for being disposed in the septic tank; a plurality of sensors disposed along the sensing probe, the plurality of sensors each including a means for providing a signal that enables a determination of whether the sensor is disposed proximal to the sedimentary layer, the scum layer, or any intervening liquid zone in the septic tank; and a remote monitor for being operably associated with the plurality of sensors wherein the remote monitor has a means for providing a remote indication to a septic tank operator of the location of the sedimentary layer, the scum layer, and any intervening liquid zone in the septic tank based on the signals from the plurality of sensors; and a microcontroller operably associated with each of the plurality of sensors for providing each sensor with a high frequency alternating current flow; whereby the septic tank operator can monitor the contents and condition of the septic tank without a need for excavating and physically inspecting the septic tank.

16. The septic tank monitoring system of claim 15 wherein the high frequency alternating current is approximately 10 KHz.

17. The septic tank monitoring system of claim 15 further comprising a multiplexer and a synchronous demodulator for multiplexing and demodulating analog voltage signals produced by the current flow to each sensor and an analog to digital converter for converting the analog voltage signals to digital voltage signals.

18. The septic tank monitoring system of claim 17 further comprising means for processing and analyzing each digital voltage signal to determine for each sensor whether the material disposed in proximity to the sensor is the sedimentary layer, the scum layer, or any liquid zone within the septic tank and means operably associated with the remote monitor for displaying information representative of whether the material disposed in proximity to each sensor is within the sedimentary layer, the scum layer, or any liquid zone.

Instant application
19. A system for distinguishing between and identifying the location of stratified layers in a container, the system comprising: an elongate sensing probe with a first end and a second end for being disposed in the container; a plurality of sensors disposed along the sensing probe, the plurality of sensors each including a means for providing a signal that enables a determination of whether the sensor is disposed proximal to a given layer of material in the container wherein at least one of the plurality of sensors comprises a temperature transducer; and a remote monitor operably associated with the plurality of sensors wherein the remote monitor has a means for providing a remote indication of the location of layers in the container based on the signals from the plurality of sensors; whereby a condition material in the container can be perceived.

20. The system of claim 19 wherein the elongate sensing probe comprises an elongate member and a retaining member slidably associated with the elongate member and a means for biasing the retaining member to an extended position wherein a distal end of the retaining member comprises the first end of the elongate sensing probe and a distal end of the elongate member comprises the second end of the elongate sensing probe whereby the elongate sensing probe can be inserted into and retained within the container by compressing the retaining member relative to the elongate member, orienting the elongate sensing probe in the container, and allowing the retaining member to decompress relative to the elongate tube whereby elongate sensing probe can be frictionally retained in the container with the first end of the elongate sensing probe frictionally engaging a first boundary of the container and the second end of the elongate sensing probe frictionally engaging a second boundary of the container.

21. The system of claim 20 wherein the retaining member comprises at least a length adjustment member and further comprising a means for adjustably coupling the length adjustment member to the elongate sensing probe for adjusting the effective length of the elongate sensing probe.

U.S. Patent No. 6,618,118
30. A system for distinguishing between and identifying the location of stratified layers in a container, the system comprising: an elongate sensing probe with a first end and a second end for being disposed in the container wherein the elongate sensing probe comprises an elongate member and a retaining member slidably associated with the elongate member and a means for biasing the retaining member to an extended position wherein a distal end of the retaining member comprises the first end of the elongate sensing probe and a distal end of the elongate member comprises the second end of the elongate sensing probe whereby the elongate sensing probe can be inserted into and retained within the container by compressing the retaining member relative to the elongate member, orienting the elongate sensing probe in the container, and allowing the retaining member to decompress relative to the elongate tube whereby elongate sensing probe can be frictionally retained in the container with the first end of the elongate sensing probe frictionally engaging a first boundary of the container and the second end of the elongate sensing probe frictionally engaging a second boundary of the container; a plurality of sensors disposed along the sensing probe, the plurality of sensors each including a means for providing a signal that enables a determination of whether the sensor is disposed proximal to a given layer of material in the container; and a remote monitor operably associated with the plurality of sensors wherein the remote monitor has a means for providing a remote indication of the location of layers in the container based on the signals from the plurality of sensors; whereby a material condition in the container can be perceived.

31. The system of claim 30 wherein the retaining member comprises at least a length adjustment member and further comprising a means for adjustable coupling the length adjustment member to the elongate sensing probe for adjusting the effective length of the elongate sensing probe.

Regarding claims 1-7 and 12-21, claims 1-6 and 30-31 of U.S. Patent No. 6,619,118 discussed supra, claims the claimed invention except at least one of the plurality of sensors comprises a temperature transducer.

Luzzader discloses the temperature transducer 38 determines the temperature of the liquid surrounding the sensor housing 26 by conduction and radiation from the housing to the transducer mounted inside (Col.5, lines 13-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the temperature transducer as taught by Luzzader in a septic tank monitoring system of U.S. Patent No. 6,619,118 for the purpose of providing a sensor system for monitoring fluid levels within a gasoline storage tank and the like (Luzzader, Col.2, lines 3-5).

4. Claims 8-9 and 22-23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6, 14, 15-18, and 30-31 of U.S. Patent No. 6,619,18 in view of in view of Luzzader (USP 6,014,076), and further in view of Christel et al. (USP 4,832,711).

Regarding claims 8-9 and 22-23, claims 1-6, 14, 15-18, and 30-31 of U.S. Patent No. 6,619,118 discussed supra, claims the claimed invention except at least one of the plurality of sensors comprises a thermistor.

Christel et al. discloses the temperature sensing devices, such as termocouples, thermistors, and temperature transducers (Col.10, lines 51-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the temperature sensing devices, such as thermistors as taught by Christel et al. in a septic tank monitoring system of U.S. Patent No. 6,619,118 for the purpose of providing an adsorbent fractionator with automatic temperature-sensing cycle control and process.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 12-13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinney (USP 3,923,655) in view of Williams (3,025,962) and Luzzader (USP 6,014,076).

Regarding claims 1, 12-13, and 19, McKinney teaches a sedimentation tank/septic tank to include a string of temperature sensors/elongate sensing probe with sensors, where each temperature sensor transmits a signal to a temperature comparison device/electronic unit. The interface between the clarified fluid and the settled solids is determined when there is a sharp temperature differences. Once the level of the settled solids or sludge has been determined by the temperature detectors/sensors, the plant operator can decide whether or not wasting of sludge is appropriate at a given time (abstract; all figures; col. 4, lines 38-68; col. 5, lines 1-16; col. 6, lines 50-67). The temperature comparator compares the temperature and from there the system can be controlled automatically responding to the level with little or no attention from the operator (abstract; all figures; col. 7, lines 55-64; col. 8, lines 1-3). The operator does not have to be inside the sedimentation tank to know the content and/or condition (temperature) (all figures).

McKinney does not directly teach a remote monitor/indication of the location of the different layers. However, it is strongly suggested by McKinney that a visual aid/display is used in the system (col. 7, lines 5564; col. 8, lines 1-3). Modifying McKinney invention to include a remote monitor/display similar to

Williams will call for minimum change (i.e. connecting an instrument via cable (col. 3, lines 53-71)) so an operator can monitor the tank is strongly suggested (col. 7, lines 55-64; col. 8, lines 1-3; figure 4 and 7). The remote display can be connected to the comparison device or be part of the comparison device.

McKinney does not teach at least one of the plurality of sensors comprises a temperature transducer.

Luzzader discloses the temperature transducer 38 determines the temperature of the liquid surrounding the sensor housing 26 by conduction and radiation from the housing to the transducer mounted inside (Col.5, lines 13-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the temperature transducer as taught by Luzzader in a sedimentation tank/septic tank of McKinney in view of Williams for the purpose of providing a sensor system for monitoring fluid levels within a gasoline storage tank and the like (Luzzader, Col.2, lines 3-5).

7. Claims 8-9 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinney (USP 3,923,655) in view of Williams (3,025,962) and Luzzader (USP 6,014,076) as applied to claims 1 and 19 above, and further in view of Christel et al. (USP 4,832,711).

Regarding claims 8-9 and 22-23, combination of McKinney and Williams discussed supra, claims the claimed invention except at least one of the plurality of sensors comprises a thermistor.

Christel et al. discloses the temperature sensing devices, such as termocouples, thermistors, and temperature transducers (Col.10, lines 51-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the temperature sensing devices, such as thermistors as taught by Christel et al. in a sedimentation tank/septic tank of McKinney in view of Williams and Luzzader for the purpose of providing an adsorbent fractionator with automatic temperature-sensing cycle control and process.

Allowable Subject Matter

8. Claims 10-11 and 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with other limitations of the claims, the cited prior arts fail to teach a rate of heat transfer from the thermistors to a surrounding medium is determined by the formula:

$Q = kA(T-T_0)/\delta$

where $A= \pi D^2/4$ and is the area of the thermistor and δ is the appropriate boundary-layer thickness, and k is the thermal conductivity of a uniform medium in a vertical adiabatic wall in which the thermistor is mounted, as recited in claim(s) 10 and 24.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

July 6, 2004

John Barlow
Supervisory Patent Examiner
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